



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,365	10/26/2001	Steven B. Dawes	SP01-277-9272-8	2877
20792	7590	06-02/2004	EXAMINER	
MYERS BIGEL SIBLEY & SAJOVEC			CHIN, PETER	
PO BOX 37428				
RALEIGH, NC 27627			ART UNIT	PAPER NUMBER

1731

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/053,365

Applicant(s)

DAWES ET AL.

Examiner

Peter Chin

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-131 is/are pending in the application.
- 4a) Of the above claim(s) 15 and 57-131 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-56 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
- Paper No(s)/Mail Date 10/21/01:1/21/03

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claim 15 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim must depend alternatively from preceding claims. See MPEP § 608.01(n). Accordingly, the claim 15 has not been further treated on the merits.
2. Claims 1,2 and 51 are rejected under 35 U.S.C. 102(b or e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ishiguro et al (5,022,904), Yokoyama et al (6,535,679). Schneider et al (4,557,561), Hicks (4,579,571) or Ishikawa et al (5,895,515).

Ishiguro et al shows a process for doping a soot preform with fluorine (F) containing gas in a uniform heating or a zone heating furnace (Figures 3A and 3B), which furnace reads on and corresponds to the claimed "vessel". The preform is doped in a first doping step with an amount of F that is 1.3 – 2.5X the amount of F used in the second step. Thus different F partial pressure is used in each doping step and hence differing doping atmosphere is utilized. Thus, Ishiguro et al anticipates or obviously shows the claimed invention.

Yokoyama et al relates to a process for making an optical fiber. A silica soot preform is produced in which a number of cladding layers surround a core. The clad layers have differing refractive indices, which are a result of heating the preform in gaseous atmospheres containing different levels of dopant, e.g., F. Dehydration and sintering are performed in a single vessel, penultimate paragraph of column 9. The present claims by virtue of "comprising" claim language, are open to intervening clad

layer formation between the doping steps. Thus, Yokoyama et al anticipates or at the least obviously shows the claimed invention.

Schneider et al discloses a process for forming silica preform having a core and multiple clad layers. As noted above, the claims are open to separate doping of each cladding layer. The preform is doped in an F containing atmosphere and each layer doped with a different amount of F and thus, in a different doping atmosphere. The doping of each layer is performed in the same vessel. Thus, Schneider et al anticipates or obviously shows the claimed invention.

Hicks relates to a process for doping a silica preform with F. Multiple layers are formed on a core. Each layer of soot is fluorinated in a gaseous F containing atmosphere after soot layer formation and consolidated.

Ishikawa et al discloses a process for doping a silica soot preform. The preformed is doped simultaneously with the growth of the soot preform. The concentration of the gaseous dopant, e.g., an F containing gas, in the doping atmosphere is changed according to the desired doping profile. The incremental doping is performed in the same vessel. The claims by virtue of claim language is open to doping during soot formation and deposition. Thus, Ishikawa et al anticipates or obviously shows the claimed invention.

Note in regard to claim 51, in absence of further limitation(s) defining "pulse", the claim reads on the initial charging and subsequent change over to different dopant concentrations in the prior art treatment vessel.

3. Claims 3-14,16-50,52-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiguro et al (5,022,904), Yokoyama et al (6,535,679), Schneider et al (4,557,561), Hicks (4,579,571) or Ishikawa et al (5,895,515).

Ishiguro et al measures the total pressure and the partial pressure of the dopant. Yokoyama et al measures the dopant in terms of ppm in the doping atmosphere. Schneider et al measures the dopant in terms of volumetric flow rate. Hicks is silent as the measurement of the amount of dopant in the doping atmosphere. Ishikawa et al measures volumetric flow rate of the dopant gas. It would have been obvious to pressurize and/or depressurize treatment vessel in the manner claimed in order to charge and change the amount of dopant gas in the prior art processes. The claimed temperatures and pressures recited in various dependent claims are obvious optimization of the doping process.

4. Applicant's election without traverse of the Group I invention in Paper received on March 12, 2004 is acknowledged.

5. Claims 57-131 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper received on March 12, 2004.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Chin whose telephone number is (571) 272-1186. The examiner can normally be reached on Monday through Friday.

Art Unit: 1731

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in dark ink, appearing to read 'Peter Chin', with a long horizontal flourish extending to the right.

Peter Chin
Primary Examiner
Art Unit 1731